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ABSTRACT

The anthropological study of the city's role in the evolution of human systems requires the use of both macro and micro levels of analysis. From the macro perspective, the city is viewed as part of a wider complex society, while from the micro point of view, the city provides the context for understanding specific human institutions or processes within the urban area. The necessary link between the two levels of analysis is provided by research on another level, one that focuses on the city itself and its internal complexity. A study of urban households in Oaxaca City, Mexico, demonstrates how research that uses the city as the unit of analysis may be conducted. The first phase of the research involved the data collection of the physical and social environment in order to provide a general description and the basis for developing a typology of residence patterns in the city. The second phase involved the collection of socioeconomic data for the different types of localities indentified in the first phase. The study showed that in conducting anthropological research on the city, the unit of analysis should be easily identifiable as well as representative, and that studies in such complex urban settings should be undertaken by groups rather than by single individuals. (MJL)

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Anthropological Approaches to the Study of Housing Areas: Lessons from Oaxaca City, Mexico.*

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INTRODUCTION

In his presidential address to the Society for Urban Anthropology, Anthony Leeds identified "two main streams of thinking about the urban in anthropology" (Leeds 1982). The first he links with archaeology and the tradition of V. Gordon Childe and Robert McC. Adams. Here the city is a manifestation of wider social and economic processes which at various points in time have produced dense human settlements. Urban centers are seen as having specific functions in a wider "complex" society, making them the important unit of analysis if one is to understand the evolution of complex human systems. This realization that cities are the product of regional and global socio-economic forces has led anthropologists to attempt an identification of the functions, or roles, or cities and then a derivation of city typologies (Eames and Goode 1977; Fox 1977). In addition, anthropologists and others have become interested in describing the city's wider context and the effect that context has on any particular urban system (Collins 1980). This I would call the macro-trend in modern urban anthropology. It is analogous to what Eames and Goode have called the study of "contemporary complex society" (1977).

The second stream identified by Leeds is the close-in, micro-level study of traditional social anthropology, or what Eames and Goode term "anthropology in the city." Local-level studies in urban areas generally have as their subject of investigation an individual, a well-defined sub-population, a set of networks, or a problem such as migration or drug abuse. In such studies, the urban setting forms a backdrop for understanding these human institutions.

I do not wish to enter here into what I consider the rather trivial debate over who is really "doing" urban anthropology. The macro-study people continually suggest that they represent the traditional, "holistic" view of anthropology and therefore are the legitimate heirs to the field. They point to the difficulties of doing traditional in-depth field work in the city and claim anthropologists must adopt the methods and theories of other disciplines if we are to understand the modern complex world. The micro-study people react to these suggestions with statements about the flavor of the city, what life is really like for the inhabitants, and how they are adapting to what is often seen as an abnormal human condition (i.e., living in centers of more than 5,000 inhabitants).

I think this argument is missing the essential point. How can we define what urban anthropology is if we can't agree (as recent schisms in departments around the country attest) on a single definition of anthropology? This is not to say that an anthropologist does not know when he or she is an anthropologist. It simply says that my colleagues may not agree with my own assessment about what I am doing. The only real unifying traditions in our field have been the requirement (1) that the neophite immerse herself or himself in a society or culture to the extent that he or she can make sense out of the daily lives of the subjects or of the material goods distributed over the landscape, and (2) that in some way these aspects of human culture are related to human social organization. As a discipline, then, our primary concern has always been and should continue to be the discovery of and explanation of variation in human social organization. How do people sort themselves into various groups and subgroups? What cultural institutions do they

use to justify and maintain a particular sorting? Finally, how do particular cultures interact with their environments at various levels to enable them to exist for the brief period given to any human social system?

This is the very stuff of anthropology in the traditional sense. We must have both the micro- and macro-level of analysis if we are truly to understand the role of the city in the evolution of human systems and how humans have reacted to those developments in different places and at different times. There is, however, one stream of thought missing from the enumeration given by Leeds--that is, "the anthropology of the city." Clearly, anthropologists can operate at the macro- and micro-levels of the human experience, but how do we link the two? It seems to me that just as regional studies may serve to link macro-economic theory with micro-economic behavior (Smith 1976), research in which the city and its internal complexity are the focus can provide an important link between the global level of analysis, so popular in the wake of Wallerstein's success, and the traditional micro-level study of anthropology. It is only this anthropology of the city which will provide a true picture of the variations in urban form resulting from various urban functions, as well as a true picture of the context in which the more traditional units of anthropological inquiry must function.

Which brings us to what is perhaps the only point on which the two traditions in urban studies can agree: "It can't be done. The city is too complex and too big; you can't really get to know the people." My belief, is that it can be done. An anthropologist, with the aid of a few well-trained assistants, does have the capability of gathering data

from an urban area which can be used for comparative purposes with information from other cities (as requested by Arensberg in 1968) and which provides a picture of much of the context in which urban residents are acting out their daily lives (as requested by Leeds in 1968 and Rollwagen in 1972 and 1975). To do this we must, as Leeds did in his presidential address, look to archaeology for a model of how we might go about investigating "the city" as an entity rather than individuals in the city or the city as a node in a wider network.

In the tradition of Millon (1973) at Teotihuacan and Blanton (1978) at Monte Alban, we should look for the significant units in the constructed environment within the city and then interpret the distribution of those units as a reflection of the relationship between the function of the city in a system and its internal structure. Cities are built by humans, and as such, the spacing of homes over the urban landscape is not a random process. It is the physical manifestation of the interaction of culture with economy and environment, and a clear understanding of that structure can provide the anthropologist with the needed link between the macro- and micro-levels of current urban anthropology.

I think the project I have been involved with over the past 10 years provides a good example of how anthropologists can go about undertaking the study of the city. The remainder of the paper will be divided into three sections. First is a discussion of the units of analysis that are useful in looking at a city. Next is a description of how we went about investigating the nature and structure of the city of Oaxaca, Oaxaca, Mexico. Finally, I will conclude with some remarks about what we have learned from our experience.

RESIDENTIAL UNITS AS A FOCUS OF INVESTIGATION

That the residential, or dwelling, unit is a complex phenomenon has long been recognized in geography, urban planning, and anthropology. While all cultures provide some form of shelter for their members, housing is much more than simply a place to seek protection from the sun or rain and to keep ones belongings. It is the location of a significant portion of a society's cultural and symbolic interaction. The residence is where much of an individual's socialization occurs. It is the physical location of the most significant social unit above the dyad and lower than the family--the household. It is where cultures reinforce sexual division of labor and conduct. And it is where we go to hide from ghosts or where secret groups go to create them. As such, the physical environment is directly tied to important socio-cultural aspects of any human society and is an important symbolic element in the interaction between humans.

It is this symbolic aspect which makes housing and the built environment particularly intriguing for anthropological inquiry. Symbols are never randomly distributed in a society. They are used by the culture to make statements about itself, its relationship to the natural world, and about the relationship between individuals and groups. Just as the matrilocal clustering of households in London (Bott 1971) and of wikiups among the Apache is a reflection of strong matrilineal ties in those societies, the clustering of households with respect to income and class in the United States is a reflection of a major force in the social organization of that society. This tendency to sort symbols into meaningful categories creates what the cultural geographers term the "social areas" of cities.

It is common to equate the social area, a more or less homogeneous region in the city, with what in North America we call a "neighborhood." From my perspective, the neighborhood and the social area are two different things. "Neighborhood" is generally invoked by urban residents and theoreticians to imply that a little portion of rural life still lives in the city. You know the people in your neighborhood and they presumably provide a certain degree of the social support presumed to exist in the rural village or hamlet. The notion of social area, or locality, as we call it in our study, is of a homogeneous region with respect to the adaptation made by the residents to their city. The built environment of a social area is a reflection of the value the system places on the contribution residents of the area are making to the continuation of the society.

It is this tendency of a significant unit of social interaction and adaptation--the household--to cluster with other units which have made a similar adjustment to the urban setting that provides the ethnographer with the opportunity to combine statistical rigor with sound ethnographic methods in order to gain a clear picture of the complexity which is an urban system.

The next section of this paper will describe how we did it in Oaxaca.

THE OAXACA URBAN HOUSEHOLD STUDY

The method used in the Oaxaca urban study contains two phases. The first is a study of the general urban context modelled after A Method for Survey-Evaluation of Urban Dwelling Environments (Baldwin 1974), developed by the School of Architecture and Planning of the Massachusetts Institute of Technology and related publications (Davila et al. 1973; Caminos et al.

1969). The second phase of the study is the application of a socio-economic questionnaire to a sample of the city's population, making it possible to bring together the physical/social environment as described by the first phase with pertinent socio-economic data which can be analyzed in a statistically valid manner.

PHASE I

Initially, available information was used to put together a general picture of the city with respect to such variables as climate, population growth, the spatial configurations of the city's growth, types of land tenure, patterns of land use, and so forth. This information was gathered from governmental agencies and from "qualified informants" such as local social scientists and politicians who had knowledge of the city and its environs. The data were then used, along with the personal observations of project people, to divide the urban area into "localities," which were

> relatively self-contained residential area(s) within an urban context. In general, [a locality] is contained within physical boundaries that are of two types: barriers and meshing boundaries. Mountains, water, limited-access highways and sharp changes in land use are considered barriers. Main streets and political, or municipal, divisions are considered meshing boundaries. (Caminos et al. 1969:x).

Because the criteria for defining localities were physical for the most part, project architects, after consulting with the social scientists, took primary responsibility for this initial division of the city. After looking at air photos of the city and making several inspection trips to different areas, we identified twenty-four localities in Oaxaca meeting the criteria set out in the research design.[1] These localities became the units of investigation in the next step of the survey.

Two-person teams consisting of an architect or engineer and a social scientist made on the ground checks for homogeneity within each locality by walking every street. Areas found to differ with respect to land tenure, housing styles, age of settlement, and the general socio-economic condition of the population were designated "sub-localities" and noted on a map. There were 116 in all, and they corresponded almost exactly with the political division--the colonias, or neighborhoods--of the city. These sublocalities, or colonias, then became the units of study.

With this information in hand it was the job of the survey team to choose the most typical block in each colonia.[2] The team surveyed this block by measuring its dimensions, counting the number of lots and houses, and drawing a detailed map of the use of space. In addition, a typical house within the block was measured and a plan drawn with notations as to construction type, services available, age, and general condition of the dwelling. This home was then considered to be the typical house for that neighborhood.

While the architect was measuring a home and gathering physical data on the lot, the social scientist carried out an in-depth, directed interview with an adult member of the household living in that home and with one other on the block. These interviews were structured to cover the major aspects of the family's life history and the history of the neighborhood.

With the completion of this phase of the investigation, we had a good general picture of the city with respect to its climate, history, economic structure, demographic history and prospects, and spatial distribution of its population.

In addition to providing the data for a general description of Oaxaca, the first phase of the study was designated to develop a series of typologies of residence patterns. That is, we wished to group the colonias of the city into distinctive living systems, or neighborhood types.

The notion of housing/tenure system, while central to the method, is not a rigid concept which requires that all regions of a city be placed in a prescribed set of categories--e.g., suburb, shanty town, invasion, apartment. Rather, it is important that systems of land use and housing for a particular city or region be ethnographically as well as empirically valid. For example, in Mexico City, where an M.I.T. survey was carried out, for the poorer populations four types of housing systems were identified: ciudades predidas, containing approximately 2% of the entire population of the city; vecindades, 23%; colonias populares (which tend to have their origin in land invasions or some other type of irregular acquisition), 39%; and unidades de habitacion (government-sponsored projects), 6%. This division of a city contrasts with Nairobi, another M.I.T. study site, where vecindades take in 49% of the population; garden houses, 23%; and apartment complexes, 28%.

In Oaxaca we wanted our classification of living spaces in the city to reflect the complex relationship between land tenure, type of housing, and the social welfare of the population, rather than reflect simply the housing/tenure system. To do this we took into account income of household heads and a series of socio-cultural variables which would give some indication of the non-economic quality of life in the locality. On the basis of our discussions and interviews with numerous individuals during

the initial phase of the study, we looked at indices of education level; migration; the degree of intracolonia social cohesion (as reflected in the number and types of local organizations and whether the colonia used a communal labor system for the development of local infrastructure); the attitudes of the residents towards political and economic development; nad the general morale of the colonia, as suggested by the residents' expressed feelings about the neighborhood and its relation to the rest of the city. The combination of these physical, legal, economic, and social variables led us to define the following six types of living spaces: invasions, colonias populares (these being divided into three groups--those with very low incomes, low incomes, and moderate incomes), site-and-service projects, pueblos conurbados (or rural cantonments), the center city, and middle-class housing. They are briefly described below, as they were perceived at the time of classification.

Neighborhood Types

Invasions. Settlements recently established on invaded land are not a significant type of living system in present-day Oaxaca, although invasions historically have played a role in the development of the city. The area presently occupied by invasions is in the neighborhood of 1% of the total area of the city, and except for one group near the old zoo, invaders tend to be holding land of marginal value. The diagnostic feature for this sytem of living site is that, having been invaded in the recent past, there may still be some degree of possibility that the residents will be removed by the civil authorities. Land tenure is by definition irregular. There is little permanent housing and almost all residents are extremely poor.

Colonias Populares. Generally these are older irregular settlements which have either been regularized by the government or are in the process of regularization. They comprise over 50% of the land in the city and hold a major portion of the population. Because of their massive predominance and heterogeneity as a group, we divided them into three types on the basis of incomes reported during the block interviews: Colonias populares with very low incomes were those in which reported incomes for the head of household were less than the federally-established minimum wage of $81 U.S. per month; in low income colonias populares, household heads reported between $81 U.S. per month and $162 U.S. per month; and the moderate-income colonias were designated those with household heads reporting incomes over $162 U.S. per month. In general, there was an increase in the quality of life in the colonias populares as one moved up the scale, though this was not always the case. In some instances, poorer colonias, because of their internal organization and cohesiveness, had been able to generate infrastructure not available in wealthier areas. This was especially true if the poor colonia had been in existence for a significantly longer period of time.

Pueblos Conurbados. These neighborhoods are distinguished from the rest of the city by their unique historical and political relationship with it. They are older independent communities which have over the years become either bedroom communities for the center or colonias directly under the political control of the city government. In general, while the income in these regions are not as high as in other parts of the city, there exists a great deal of community spirit which translates into higher levels of community services for the population. In addition, the

homes have been around for a longer period of time, and the process of autoconstruction by which poor households may build a good permanent dwelling through long-term, if low-level, investment has produced a fair number of substantial homes. Pueblos conurbados comprise approximately 11% of the area of the municipio of Oaxaca.

Site-and-Service Projects. These living sites were a special category distinguished by the nature of their development rather than by an economic measure or land tenure. It was our concern to see what differences in housing and attitudes could be discerned in a population which in many respects was similar to the colonias populares in configuration, but which had received some basic aid from the government. Such colonias occupy only about 8% of the urban area of the city.

The Centro. The oldest portion of the city is the central area, which despite its heterogeneity was designated as one living space. This was done primarily because of the general agreement on the part of the city's citizens that the centro defines a single spatial unit. The physical boundaries of this region coincide more or less with the boundaries of the city as of 1940. As the area in which state and federal governments have focused their attention, it is known as a place where services are available. Social integration in the centro, despite its relatively small size (20% of the city) is low. It is, however, the center of action for the entire state and for that reason, a favored living location.

Middle-Class Housing. The middle-class housing system of the city has many of the characteristics of the moderate-income colonias populares and the site-and-service projects, except for their higher income levels

and more "modern" housing. In general, they are of two types: either governmental mass housing projects in which large numbers of detached and semi-detached homes are built for the middle- and upper-level salaried employees of Mexico, or private subdivisions (fraccionamientos). Like subdivisions in the United States, these range from entire groups of houses being offered for sale by the developer to vacant lots with services. In all cases they may be recognized by the regularity of their layout and modernity of construction. As in similar communities in the rest of the world, social cohesion within these middle-class enclaves tends to be low, as the conditions of the colonias generally do not require collective action on the part of the residents to improve their situation.

With the completion of Phase I we were in possession of a comprehensive idea of the city of Oaxaca was like. We had reviewed its growth with local historians and politicians. We had checked with all the relevant government agencies to ascertain the levels of services, general living conditions, and attitudes of the bureaucracy towards the various regions of the city. We knew where the "planned" future growth of the city was to be. More importantly for the anthropologist, we had walked over every street in the city. We had measured the living quarters, gathered material culture data on over 100 households, and conducted in-depth open interviews with over 170 households.

We spent a week resting from the rigors of this first phase, discussing the city, and in general preparing for Phase II of the study.

PHASE II

The stratification of the city for the purposes of the sample relied on the data from the first phase of the study in conjunction with the division of colonias into living systems. We wished to sample each neighborhood type appearing in each locality defined in the original phase. This would allow us both to determine the extent to which homogeneity of socio-economic status held in each area and to see just what effect tenure and house type were having on available services and attitudes towards development. The result was a sample of fifty-two different areas of the city ranging from the poorest sections in the most recent invasions to the wealthiest new developments in San Felipe del Agua.

Within each of the areas to be sampled we chose 10% of the homes at random, with the stipulation that a minimum of thirty homes be reached in each area. The thirty-home limit would give us the minimal number necessary for valid statistical analysis.[4] Without this lower limit on the number of interviews, some samples would have contained no more than fifteen cases. In the end, we had 1,479 interviews for a city of approximately 150,000 people. This represents about 5% of the households of the city, ranging over the entire economic spectrum.

The Survey Questionnaire

The instrument used in the investigation had three parts in its final form. After an initial identification of house type and usage and record-keeping items, the first section dealt with the socio-economic situation of the household. For the first twelve members, beginning with

household head, we requested the following information: relationship to the household head, age, marital state, sex, education, ethnicity, place of birth, occupation, stability of work, location of work, and wage. We then asked for figures or estimates as to monthly household expenses for rent or mortgage payments, taxes, food, fuel, water, electricity, transportation, health care, entertainment, time payments for household goods, savings, and the ubiquitous "other". We also asked for transportation information: type, time spent in travel per month, and distance round trip for work, market, and school.

The next section of the questionnaire dealt with the physical and social security of the household. Questions covered costs and actual value of the lot and home; the year in which the present lot and house were purchased; the type of ownership; and types of financing the household was or was not able to obtain in purchasing the lot or building the home. Next, data were collected on house size, services available, and construction materials used in the walls, roof, doors, floors, and windows. In this section we also gathered information concerning how the residents of an area felt about their neighborhood and the house they were living in. Further, we asked about plans they had for improving their home or colonia and about improvements they had made over the past two years. Concerning social security, we obtained information about whether or not the household had access to any of the governmental or private social security programs in the country,[5] and if so, what types and with which agency. Finally, we asked about the most common illnesses in the household and the causes of the illnesses.

The last section of the instrument dealt with household history, aspirations, and attitudes towards development. A two-part migration history--the first dealing with moves in and out of the city of Oaxaca, the second with moves within the metropolitan region--was taken for each household. This data covered the last three moves of each type and included data on the location from which the move took place, reason for the move, and year. We asked people whether they would like to see any changes in their household situation, their work, their house, or their neighborhood, and what those changes would be. Next, we asked people to rank-order and scale five areas of the city with respect to desirability as a place of residence, and eleven items (such as land tenure, electricity, and the political organization of community members) with respect to their importance in achieving a higher standard of living. Finally, we asked people about their attitudes toward social and political integration with their neighbors and whether or not they had formed ties with them through compadre (fictive kin) relationships or voluntary organizations.

The Interviewers and Controls on Data Collection

The questionnaire was administered by a group of interviewers who were trained for the task by myself and the professional staff of INDECO-MEXICO. Most were second-year students from the local school of social work, and the rest had worked with anthropologists in varying capacities in the past. Before they went to the field interviewers participated in a one-day seminar on the questionnaire and the information being sought with each question.[6] Next, each individual was asked to interview her/his partner, and the responses were then discussed with one of the directors.

If it was felt that the correct question had not been asked, it was discussed with the interviewer until we were certain she/he had the idea. For the first few days, a new interviewer went to the field with an experienced member of the crew.[7] When the more experienced person was convinced the candidate could handle the interviews without further supervision, an interview was carried out by the candidate on one of the professional staff, who checked once again for direction and content of the questioning. If this interview was successful, the new individual was considered a fully-qualified fieldworker.

In addition to these data controls, the professional staff kept constant surveillance over the field personnel to ensure the integrity of the sample and the proper application of the instrument. Further, each questionnaire was reviewed by myself or one of the individuals from the staff of INDECO every evening, and any inconsistencies or data which did not fit with the pattern being established in an area were discussed with the interviewer to ascertain if the data were correct or if possibly there had been some mistake in collection. We found what we estimated to be a 5% error rate in the questionnaires, which we then cleared up either by interviewing again or by replacement. Most of these inconsistencies had to do with the notion of permanency of work and with the relationship between income and outgo.

A final and unexpected check on the quality of our interviewers was the chance falling into the sample of several acquaintances of members of the team, some of them Mexican or North American social scientists. When such an individual appeared in the sample, we returned to her/his home, informed the person that we were the ones directing the study, and

asked about the quality of the interview personnel. Because the responses were positive in almost all cases, in the end we felt certain we had a data set as secure as could be expected, given the conditions under which it was gathered.

At the end of Phase II we had interviewed in a structured fashion approximately 5% of the households in the city of Oaxaca. The nature of the sample, along with an intimate knowledge of the city's physical structure, its history, and the plans its leaders had for the future, meant that we would be able to develop a comprehensive study of the internal structure of the city. In the next portion of the paper I will present some summary data on the condition of households in the eight neighborhood types we found relevant to the internal spatial arrangement of households in Oaxaca, Oaxaca, Mexico (see Murphy 1979, Murphy and Selby 1979, and Cabrera 1979).

THE NEIGHBORHOODS OF OAXACA: A SUMMARY

The most important observation is that the real Oaxaca is not obviously visible to the visitor, just as it lacks visibility to middle- and upper-class Oaxaquenos. The visitor will notice the colonias populares and the invasions as she or he enters the city, to be sure. But if visitors are asked what percentage of the people are poor, they usually answer, "About 25% or 30%." The figure is 75%. The proportion of poor residents is underestimated because the city which we visit and the city that is known and used by the middle and upper-middle class of Oaxaquenos, is either the city of the tourists or the city of the bureaucracy and the government; and that is a very pleasant and charming city. The city of the morning shape-up, the empty belly, the city of drunken desperation

and the dying child is not at all visible, despite the fact that it is the city of the majority. The poor rarely make their presence felt. Officials are always surprised at the speed, enthusiasm, and alacrity with which housing lot opportunities are snapped up by a seemingly limitless demand, or when an organized multitude erupts out of the city center to take over land at the city limits or on the hills in an invasion. Despite the smallness of the city of Oaxaca, it seems able to swallow people up--particularly the poor.

For most of these people, migrating to the city was the most important event of their lives. Studies (see Kappel and Selby (1977) and Graedon (1976) Hendrix and Murphy n.d.) which have examined the health conditions of rural villagers as well as the nutritional status and economic conditions of both villager and urbanite should be convincing to anyone--planner, architect, sociologist, economist and anthropologist--that the costs of living in the villages is very great (Malina and Himes 1977; Malina et al. 1972; Stepick and Stepick n.d.). Public health levels in the villages are so low and nutrition so deficient that 50% of the live-born children fail to live to see their fifth birthday (Kappel 1977).

The second most important event in the lives of these householders was the acquisition of a secure home site. The degree of security is arguable, of course; home sites are political footballs. But a regularized site and regularized ownership of one's home is the second step toward realization of a tolerable life.

Once that is secured one does not move again. There is no real estate market for the poor in Oaxaca. There is little speculation in

properties by people in the colonias. The middle and upper-middle class citizens sometimes say that some very clever poor people are making a killing in real estate speculation in the invasions, since they are acquiring valuable city land for nothing. I found no evidence of this whatsoever. There are stable, comparatively depressed real estate prices for those urban lots that are "suitable" for the poor. The market is kept depressed by the knowledge that should prices rise too high, beyond the capacity of the poor to pay, and should the present colonial boundaries fail to accommodate the new households constantly being formed from the immigratory flows and natural increase in the population, then another colonia will be formed by invasion. The availability of "free land" inhibits appreciation.

Real estate speculation is further inhibited by the absence of any real liquid market for properties. There is very little property offered for sale. As one inhabitant of a well-off colonia popular state it, "Where would the people go if they sold their property?" They could go to INFONAVIT if they were very lucky, or they might give up their house and go to live with their children. (But since house sites and conditions improve with age, it is much more likely that the children would come to live with them--or better, would never have left.) In some very rare cases people have been known to return to their village. Very few house sites and houses are ever offered for sale, and poor Oaxaquenos do not regard the house and site as a speculative asset.

When the colonia is young, the inhabitants are very energetic and politically active, for they must acquire regular title to their land and force the city to recognize them (Higging 1982). The more recent the

colonia, the more reticent the city. Recent colonias are high up on the hillsides around the city and therefore extremely difficult to service with water, electricity, roads, and sewers. The cheaper the land, the more easily it can be occupied, and (in general) the more difficult it is to provide with urban services. The more the colonia ages, the greater its political clout, and the more difficult it is for the city to withstand its demands. Similarly, the older the colonia, the older its inhabitants, the further advanced they are in the domestic cycle, the greater their ability to invest money in their housing, the better the condition of the houses in the colonia, and the better off the households. Processes of improvement can be seen in the following sections.

Economic Conditions

A gross measure of the economic well-being of households in the different living systems of the city of Oaxaca can be seen in the median monthly income levels for total households, especially as these compare with median expenditures for food (Figure 1). The graph provides an interesting commentary on the amount of money, in general terms, which is considered essential to meet minimum dietary needs of the average Oaxacan household. Median food expenditures show an increase until the third neighborhood type (the poor colonias populares), where they level off at M.N.$1500 per month. Only in the highest two ranked colonia types does the median exceed this amount. It is perhaps worth noting that there is no reason to believe the M.N.$1500-per-month food figure will provide a household with a nutritionally balanced and adequate diet. There is far too much evidence to the contrary concerning the physical

underdevelopment of the people of the city and region to conclude that even half the population are being adequately fed. With this amount per month for food, however, people will not go hungry; and having achieved this level of food intake, households are willing to divert money to other needs. That so many in the poorest two colonia types are unable to meet even these minimal requirements is a clear and poignant indication of their plight.

(FIGURE ONE ABOUT HERE)

In the gross household income figure there is a general rise as one moves from the invasions to the middle-class housing sections of the city, though the rise is not entirely consistent. As I have noted, the better measure is the per-adult-equivalent income, presented in Figure Two along with household size in per-adult-equivalent units. Now income levels show a decided rise from the poorest to the most well-to-do colonias, with the exception of the pueblos conurbados and the site-and-service projects, where conditions are better than income levels would suggest. In the pueblos conurbados one finds long-established and tightly-knit communities of large households that provide mutual help and security for their members along the lines of the traditional Mexican village. If one is a poor resident of a city, the pueblo conurbado may be the best place to live. The ranking of the site-and-service projects was based not so much on present income but on future potential. The rapidity with which these households have been able to set themselves up in relatively decent housing should give them a considerable advantage over their peers in the private sector. By the per-adult-income measure, the center city households are getting along considerably better than those in the

moderate-income colonias, contrary to what the gross income figures indicate. We can see the degree to which their rank among the different living systems is predicated upon their control of household size.

(FIGURE TWO ABOUT HERE)

With respect to the households in the middle-class housing systems one noteworthy condition does not show itself since the per-adult-equivalent units are given as medians. While the medians otherwise adequately reflect the relative household sizes to be found in the different colonia types, in the well-to-do colonias they fail to show that the wealthiest 5% of the households in the city are among the ones least likely to control family size. As we shall see , the poor have large families because they are better off for having done so. In the case of the rich, they bear many children because their offspring are a luxury item they can afford.

Household Composition

Household and family conditions are sensitive to neighborhood types, as well, but in a more complex way. It is clear from the household data that demographic and domestic strategies play a key role in the economic and social betterment of the household, and it is interesting to note how the family and household develop in the different kinds of neighborhoods (Figure Three). Both the presence of female heads and extended members in the household seem closely tied with the age of settlement of the various colonia types. The newest living systems--invasions (type one), site-and-service projects (type five), and middle-class housing developments (type eight)--are those that have the fewest female heads of household. For numerous cultural and structural reasons, women are less able to

participate as partners in such organized and male-dominated activities as the invasion of land. Similarly, there are roadblocks to their taking advantage of government-subsidized housing opportunities, as are represented in the type five and eight housing systems. It is rather the long-established neighborhoods where female-headed households are most prevalent. In some cases they are the result of widowing, but in other instances they represent a degree of flexibility in the employment profile of households. For example, some female heads are young women who have been educated as professionals--perhaps as school teachers--and have taken over major responsibility for the household. Needless to say, these households are doing better than average. The presence of extended households in neighborhoods follows a similar pattern. These households are least found in sections of the city where residents are not long settled. The strain of getting established seems to preclude the incorporation of additional members into the household. Households with non-nuclear family members are much more common in the better-established communities. Again, this is partly a reflection of the natural life cycle. Maturer households are more likely to be in a position where they feel compelled to include an additional member (as in the case of a parent or grandparent who is no longer able to live alone) or where they have the opportunity to do so (as in being able to convince a son or daughter to live on in the household after marriage). But is also suggests a certain flexibility in seeking out avenues to improve the position of the household.

(FIGURE THREE ABOUT HERE)

Figure Four presents data on the number of workers and non-workers in the household and worker-dependency ratios found in the different colonia types. The number of workers in households varies little across groups. The mean is slightly higher than average in the invasions and the pueblos conurbados, where large household size provides the domestic unit with more workers. In contrast, the middle-class colonias also have many members (the large household size is now apparent in the mean figures for non-workers), but they are mostly children being kept in school. Number of workers in the household is thus no higher than the city-wide mean. The moderate-income colonias populares and the center city (types six and seven) have slightly more workers as a result of their greater proportions of stage four households with working children. With little variation in the number of workers in households, the different worker-dependency ratios for the colonia types are primarily a reflection of the number of non-workers present in households. Clearly, the center city is unique among the living systems in its reduced household size.

(FIGURE FOUR ABOUT HERE)

Employment Conditions

The ranking of colonia types proves to be an excellent predictor of both the job stability of the household head and his or her salaried status (Figure Five). The one exception is the type three colonias, which have a heavy preponderance of household heads with stady jobs and a higher-than-average proportion receiving fringe benefits. Certainly, as we shall see, job stability and salaried status are particularly crucial to the adaptive success of this group of households. It is little

wonder that these conditions are much sought after and closely guarded.

(FIGURE FIVE ABOUT HERE)

Educational Levels

Figure Six provides data on proportions of household heads who have earned primary certificates together with the mean index of household education for each neighborhood type. Again, there is a general rise in these two sensitive indicators as one moves fromthe lowest to the highest-ranked colonias. A larger percentage of householders in the type three living system have completed primary relative to their assigned rank, but the household education index is only marginally higher than in the next two colonia types.

(FIGURE SIX ABOUT HERE)

One need only look at the graphs relating to employment and education to see the highly positive correlation between these two components of a household's adaptive success.

Housing Conditions

As I mentioned earlier, the life style afforded by the different living systems in the city of Oaxaca and reflected in the physical appearance of the housing in them can be seen as resulting primarily from the interplay of two major factors--time and money. Given sufficient time, all but the most desperately poor households are able to make some improvements in the living conditions of their home. A comparison of the housing data from the invasions and the very poor colonias makes that point clearly. We know that many of the very poor colonias got their start in land seizures, where invaders set up housekeeping under much the same

conditions that can be observed in present-day invaded areas. Within eight to ten years nearly half the make-shift housing has been converted into some sort of permanent dwelling. If it is no more than a cement block room with a dirt floor and a tin roof, at least the rain stays out. But the cost of this housing can be very high. We know that it is all too frequently obtained in the face of woefully inadequate expenditures for food. We also know, from numerous ethnographic studies which have come out of this area, that when food is in short supply, it is the children who first go hungry. The cost of housing is greatest for those who can least afford it, and the price is paid not only in hard-earned pesos, but in the lives of the children. Yet given time, all but the most desperately poor will improve their house in some way.

For those who have money--those whose place is in the high-ranked middle-class living system--decent housing can be obtained at not so great a cost and without the passage of time. The rich need only wait for the builders to complete the performance of their contract. Middle-level government or private-sector employees may have to wait a little longer until their name reaches the top of the list for a place in a government-subsidized housing development.

For the remainder of the population--those in the other living systems--the creation of a comfortable home and neighborhood environment comes about as an intricate interaction between the factors of time and money. The physical conditions of the living systems must be viewed in light of this consideration. For example, if we remember that type five colonias (the site-and-service projects) are among the newest sections of the city, then the differential in their state of "permanentness" and

"modernity" (represented in Figure Seven) as compared to their companion living systems seems relatively insignificant. Given as much time as the pueblos and moderate-income colonias have had, SIDOSE colonias will also develop into relatively well-established and not uncomfortable places to be. But even here in the living systems that are not so very poor, the spector of the hungry child cannot be entirely forgot. The majority of the households of Oaxaca <u>are</u> poor--too poor--and the improvements which they make in their living conditions--indeed, which they <u>must</u> make for the general health of the household--will always be made at a price that most often the children will pay.

(FIGURE SEVEN ABOUT HERE)

For most Oaxacan households, once they have found a place to settle, the well-being they derive from their physical surroundings will come almost exclusively from their own efforts and sacrifices. They will, by-and-large, not be able to move into the already well-established neighborhoods such as the <u>pueblos conurbados</u> or the center city, and the SIDOSE's remain a rarity. Rather, they must begin at the start, working their house and their community up from the ground over a period of years. What assistance they get from the government in the form of basic city services and utilities will come only reluctantly and after the passage of much time. For the majority, their aspirations for a house will not be much more than two rooms with a cement floor, concrete walls, a roof that does not leak, a bamboo fence, and glass in the windows. But even for this small amount of comfort and security the household must set priorities and make choices in light of other concerns that have at least as great an effect on the overall development of the household--

educating children, getting good jobs for those who work, and so on. For those households that most successfully adapt, their housing conditions can be a marker of that success. For others, an improvident choice of investing in their house and lot at the wrong juncture could mean the long-term failure of a rational strategy for progress.

CONCLUSIONS

What then has the Mexican Urban Household Study demonstrated about the way anthropologists should go about doing the anthropology of the city?

(1) We should remain true to the theoretical subject matter of our discipline, remembering that the method is not nearly as important as the conclusions.

(2) In undertaking the study of a city it is important to choose a discreet unit of analysis which can be easily identified.

(3) The unit chosen should have a good deal of symbolic value so that its behavior over the urban landscape is not random.

(4) Like the urban archaeologists we must begin working with other people. The city is far too complex and large for a single individual. The days of the solo anthropologist in a complex setting are numbered.

(5) Following from the last point, we must remember that maintaining a coherent congenial research group is not easy and will require all of the social theory we can muster.

(6) Finally, and perhaps most importantly, we must conquer our fear of failure. We must be willing to reach for anthropological interpretations of systems which are much larger and more complex than we have

done in the past. It is true that we will fail at times and will be dead wrong at others, but once in a while we will be rewarded with the knowledge that we have truly done justice to human social evolution and to one of the most impressive structures it has developed.

NOTES

[1]While the M.I.T. method specifies heavy reliance on air photos, we found that in Oaxaca this was not possible, because the latest photos of the city date from 1973 and have been considerably outdated by the changes occurring since then. The project did take its own air photos, which were later used to construct maps of most of the localities in the city, but resources were not available to obtain photos of a sufficiently high quality to be used as the M.I.T. methodology suggests. In any event, the project's on-the-ground approach, while more time-consuming, afforded the research team with greater direct knowledge of the city.

[2]"Within each locality segment a primarily residential block [is] selected to allow comparison of areas and densities that are homogeneous. The block is bounded on all sides by circulation so that the ratio of circulation (or service) to areas served can be compared." (Caminos et al. 1969:x).

[3]The inadequacy of government minimum wage standards will shortly become apparent.

[4]We were successful in obtaining the desired number of interviews in all neighborhoods save the invasions, where interviewers were asked to leave the vicinity before the survey was completed. Because of their uncertain status, residents were perhaps understandably perturbed by the presence of information-gatherers in their midst.

[5]It is the distinction between those individuals who have access to such programs and those who do not which marks the formal sector from the

informal sector workers in Mexico.

[6]We did not want this to be a traditional closed questionnaire, but permitted a degree of leeway in the questions so that interviewers could frame the questions in a manner suitable to the population they were dealing with at the time.

[7]Teams always went to the field in pairs. We found that there was better response if more than one person went to a neighborhood and began to ask questions than if a single individual went and attempted to convince people that she or he was part of a larger effort.

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FIGURE ONE

MEDIAN MONTHLY HOUSEHOLD INCOMES AND FOOD EXPENDITURES
FOR EACH NEIGHBORHOOD TYPE AND FOR THE CITY AS A WHOLE

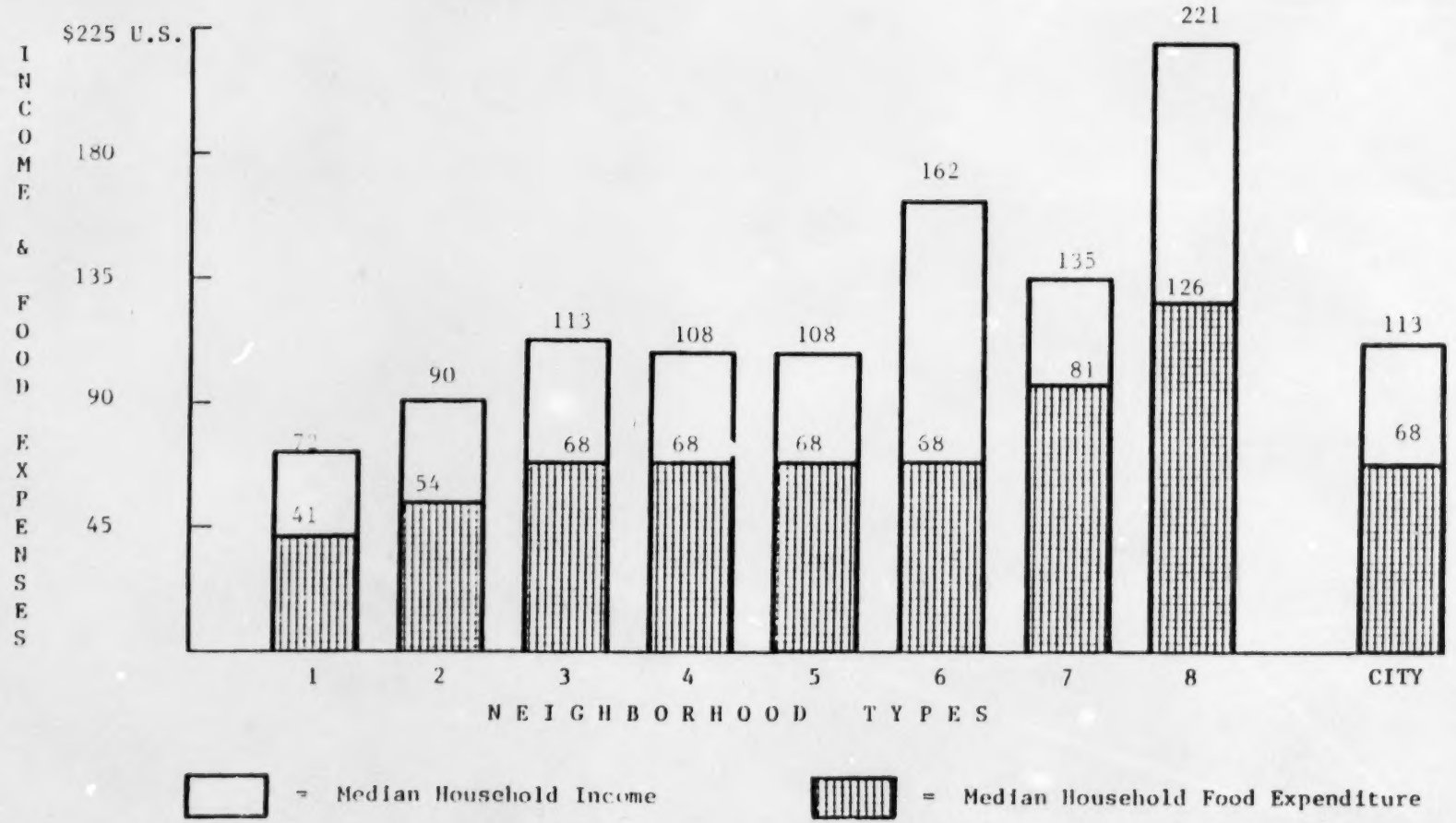
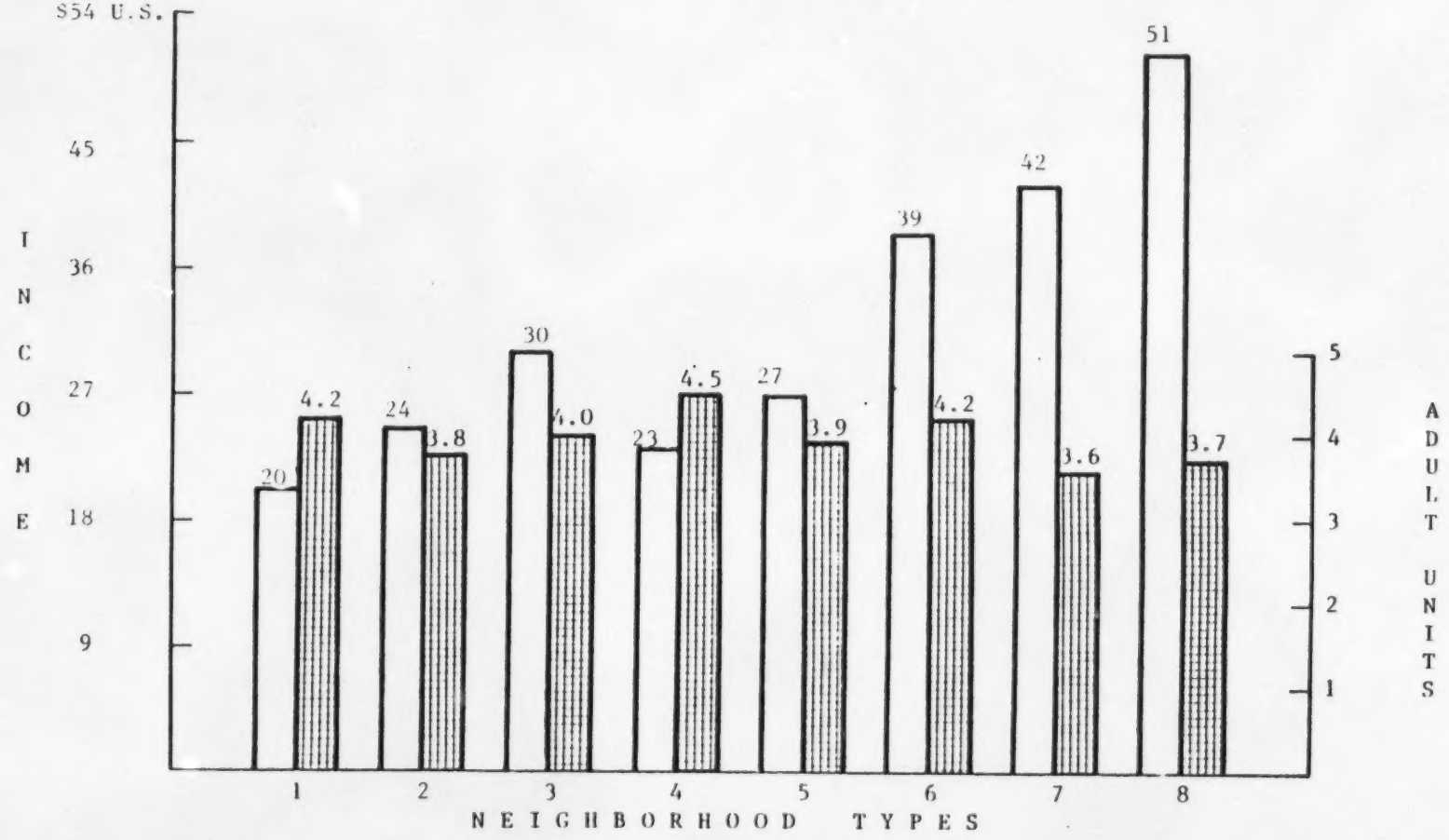


FIGURE TWO

MEDIAN PER-ADULT-EQUIVALENT INCOME AND MEDIAN NUMBER OF PER-ADULT UNITS FOR HOUSEHOLDS IN EACH NEIGHBORHOOD TYPE



= Per-Adult-Equivalent Income

= Per-Adult-Equivalent Units

FIGURE THREE

PERCENT OF FEMALE HOUSEHOLD HEADS AND EXTENDED HOUSEHOLDS
FOR EACH NEIGHBORHOOD TYPE

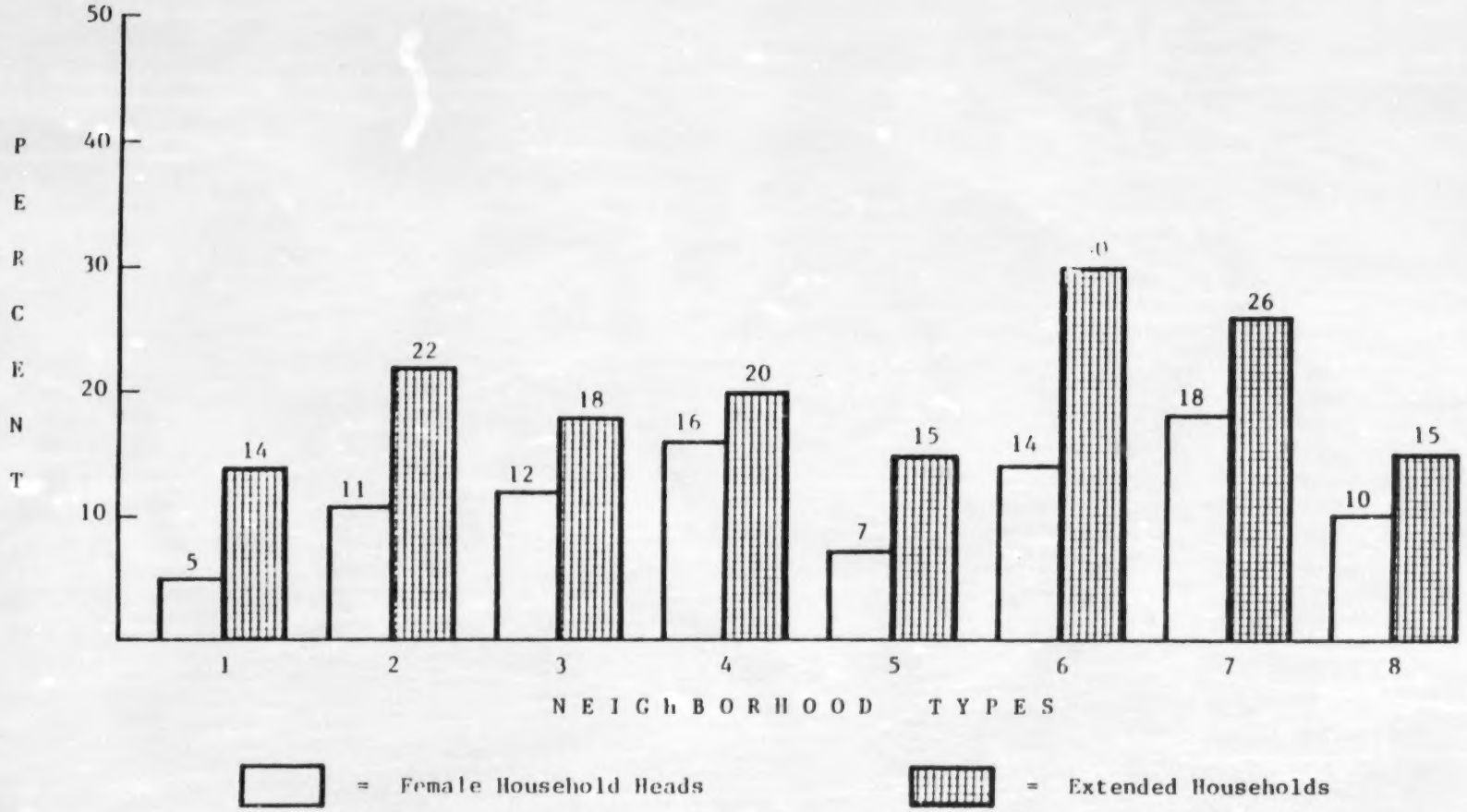


FIGURE FOUR

MEAN NUMBER OF WORKERS AND NON-WORKERS AND MEAN WORKER-DEPENDENCY RATIOS FOR HOUSEHOLDS IN EACH NEIGHBORHOOD TYPE

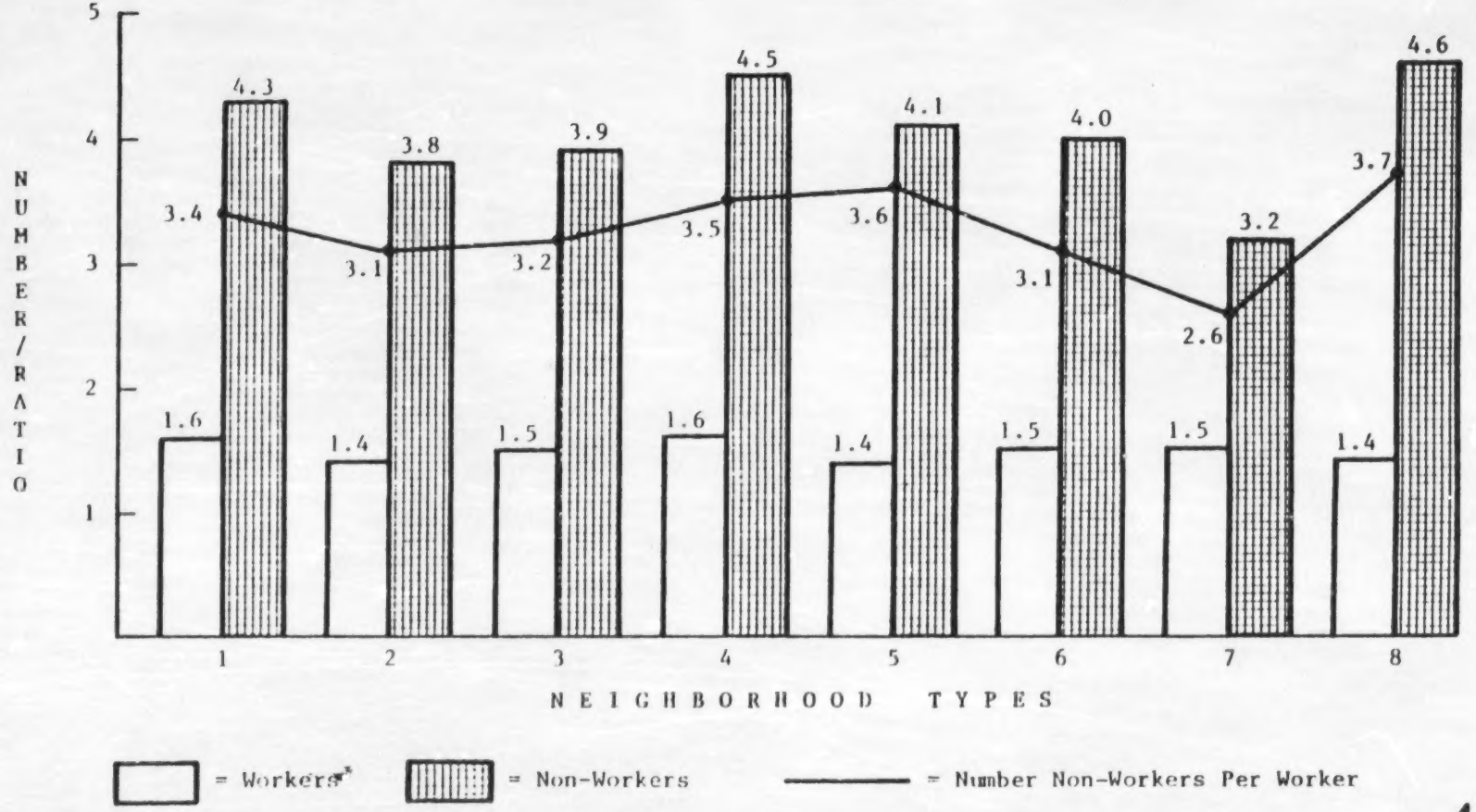


FIGURE FIVE

PERCENT OF HOUSEHOLD HEADS IN EACH NEIGHBORHOOD TYPE
WITH SALARIED AND WITH STABLE EMPLOYMENT

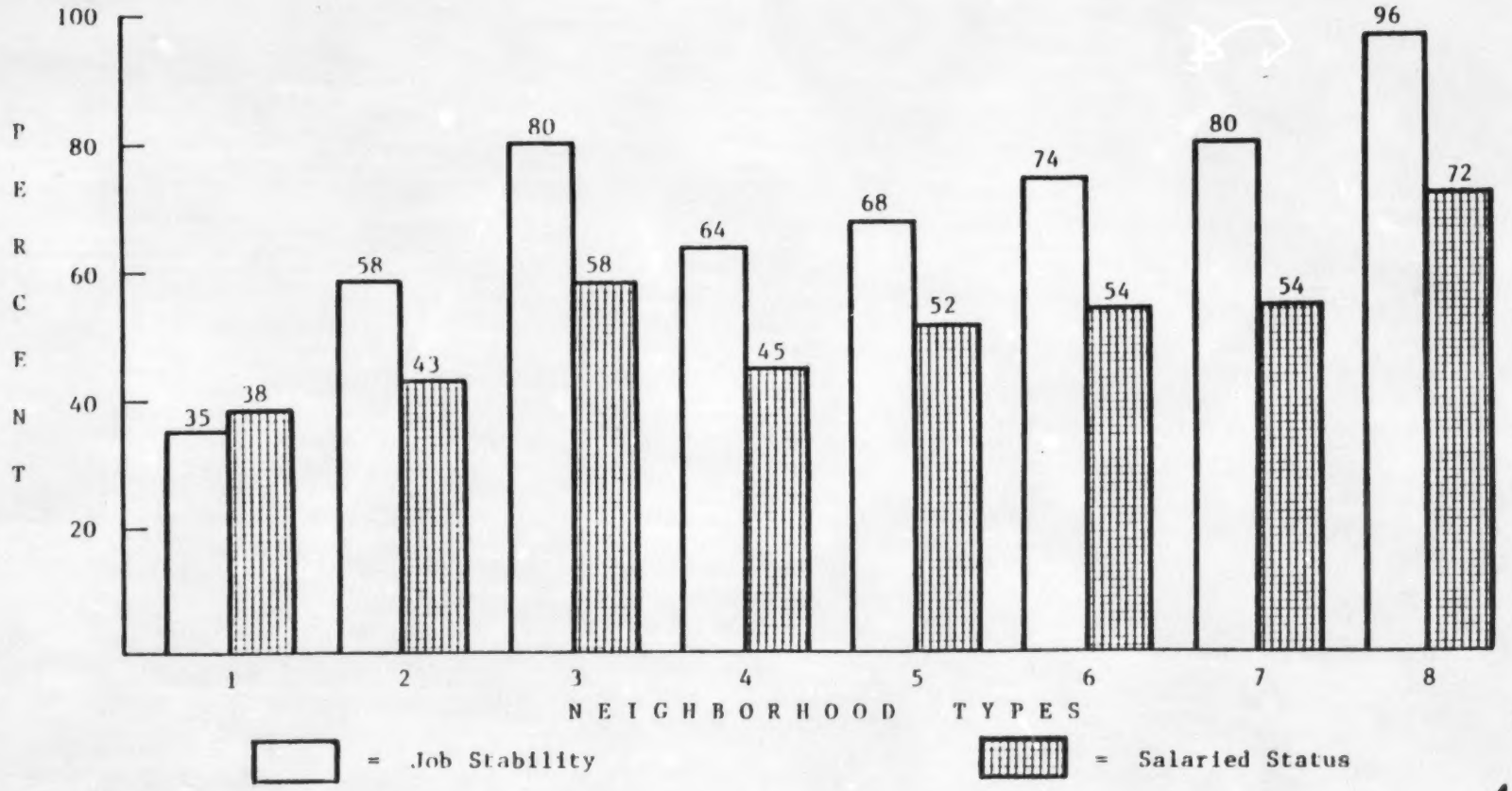


FIGURE SIX

PERCENT OF HOUSEHOLD HEADS WITH COMPLETED PRIMARY EDUCATION AND MEAN HOUSEHOLD EDUCATION INDEX FOR EACH NEIGHBORHOOD TYPE

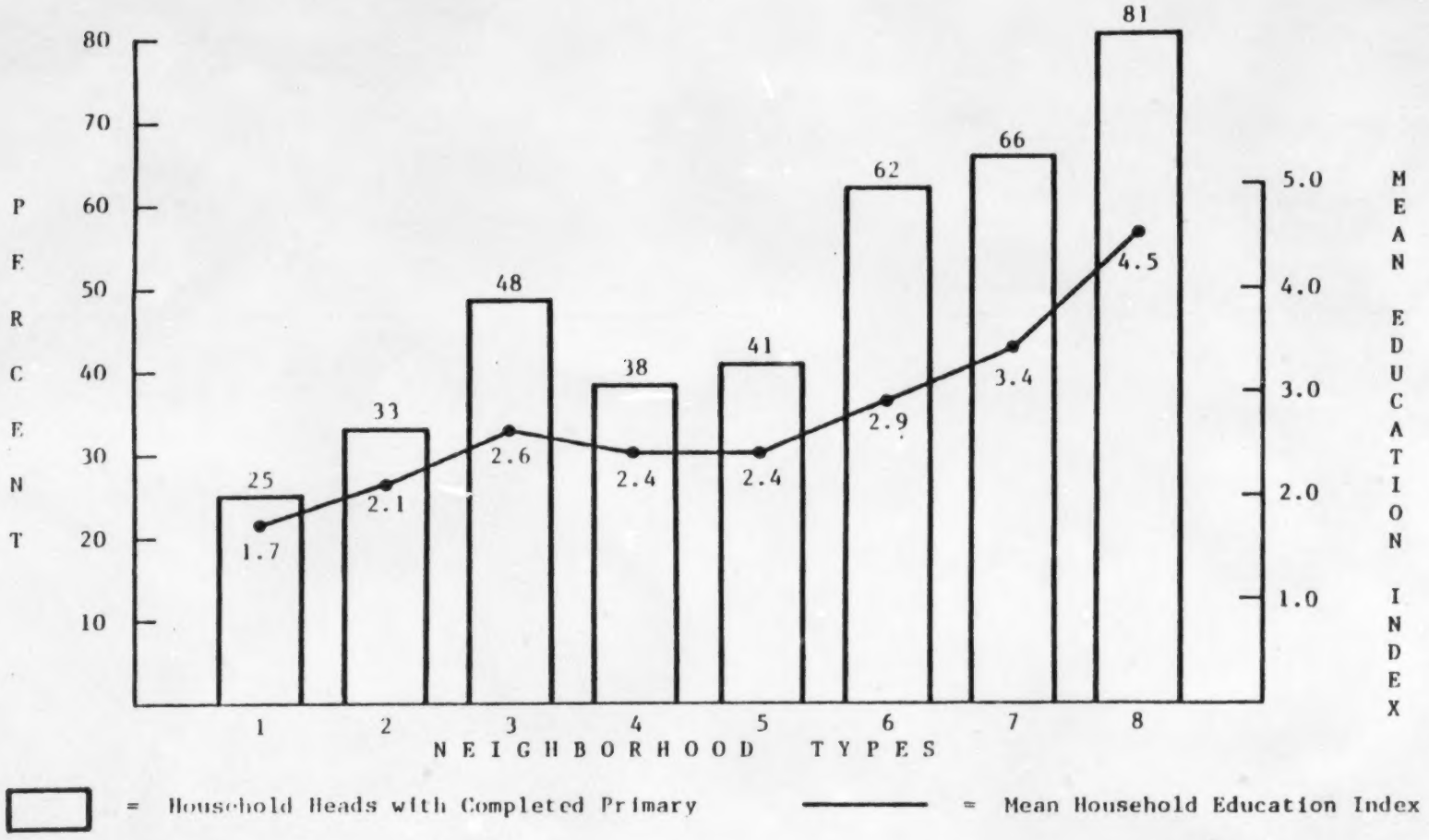


FIGURE SEVEN

PERCENTS OF PERMANENT HOUSES, JACALITOS, AND SELECTED PERMANENT CONSTRUCTION MATERIALS USED IN EACH NEIGHBORHOOD TYPE